

# Memorandum

NO

To : California Regional Water  
Quality Control Board  
3374 East Shields Ave., Room 18  
Fresno, California 93726

Date : August 24, 1983

76 13 24 27 '83 Subject: Water Disposal Project  
Application

From : Department of Conservation—  
Division of Oil and Gas

Place: Bakersfield

Attached is an application from Santa Fe Energy Company to conduct a  
water disposal project in the Fruitvale-Round Mountain zone(s) in the  
Western area, Tejon field.

The operator proposes to drill/~~convert~~ well(s) 330-32  
to injection -----  
Additional details are:

1. Strata in the injection zones contain oil and water testing 13,000-19,000 ppm TDS.
2. The fluid to be injected tests 2,513 ppm TDS and is produced from surrounding wells completed in the Santa Margarita Zone.
3. No existing well within the project area penetrates the proposed injection intervals.
4. See attached map for the proposed well location.
5. The base of useable fresh water in this area is 1760'. Fresh water aquifers will be protected by 7" casing cemented to at least 600' from total depth. The proposed injection interval is capped with a contiguous shale sequence exceeding 50' in thickness.

Additional supportive data, which are interpretive and therefore confidential, are available for your inspection at this office.

The proposed injection zone has been exempted by the EPA.

Please submit to this office any comments you may have on this proposed project. Your comments are due within 14 calendar days from the date of this letter.

Yours Truly,

David Mitchell

# DIVISION OF OIL AND GAS

## Notice of Intention to Drill New Well

C.E.Q.A. INFORMATION			
EXEMPT <input type="checkbox"/>	NEG. DEC. <input type="checkbox"/>	E.I.R. <input type="checkbox"/>	DOCUMENT NOT REQUIRED BY LOCAL JURISDICTION <input checked="" type="checkbox"/>
CLASS _____	S.C.H. NO. _____	S.C.H. NO. _____	
See Reverse Side			

FOR DIVISION USE ONLY					
MAP	MAP BOOK	CARDS	BOND	FORMS	
				114	121

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to commence drilling well Grapevine 330-32, API No. \_\_\_\_\_, (Assigned by Division)  
Sec. 32, T. 11N, R. 19W, SB B. & M., Grapevine Tegon Field, Kern County.  
Legal description of mineral-right lease, consisting of 226 acres, is as follows: \_\_\_\_\_  
(Attach map or plat to scale)  
SW 1/4 of Sec. 32

Do mineral and surface leases coincide? Yes ☒ No \_\_\_\_\_. If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of well 3200 feet North along section/property line and 400' feet East  
(Direction) (Cross out one) (Direction)  
at right angles to said line from the Southwest corner of section/property 32 or  
(Cross out one)

Is this a critical well according to the definition on the reverse side of this form? Yes ☐ No ☒

If well is to be directionally drilled, show proposed coordinates (from surface location) at total depth:

\_\_\_\_\_ feet \_\_\_\_\_ and \_\_\_\_\_ feet \_\_\_\_\_  
(Direction) (Direction)

Elevation of ground above sea level 1070 feet.

All depth measurements taken from top of Kelly Bushing that is 18 feet above ground.  
(Derrick Floor, Rotary Table, or Kelly Bushing)

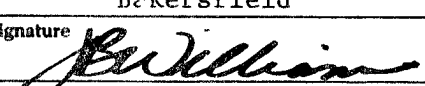
### PROPOSED CASING PROGRAM

SIZE OF CASING INCHES API	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS	CALCULATED FILL BEHIND CASING
10-3/4"	40.5#	K-55, ST&C	0'	700'	700'	700' - 0'
7"	23&29#	K-55 & N-80 LT&C & Butt	0'	5840'	5840'	5840' - 600'

(A complete drilling program is preferred and may be submitted in lieu of the above program.)

Intended zone(s) of completion Rnd Mtn & Fruitvale, 4430' - 5760', 1900 - 2200 psi Estimated total depth 5840'  
(Name, depth, and expected pressure)

It is understood that if changes in this plan become necessary we are to notify you immediately.

Name of Operator <u>Santa Fe Energy Company</u>		Type of Organization (Corporation, Partnership, Individual, etc.) <u>Corporation</u>	
Address <u>4800 Easton Drive, Suite 120</u>		City <u>Bakersfield</u>	Zip Code <u>93309</u>
Telephone Number <u>(805)322-3992</u>	Name of Person Filing Notice <u>J. B. Williams, Regional Mgr</u>	Signature 	Date <u>8-22-83</u>

This notice and indemnity or cash bond shall be filed, and approval given, before drilling begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.



Western Division  
4800 Easton Drive, Suite 120  
Bakersfield, California 93309  
805/322-3992

August 22, 1983

Tejon-Grapevine Well No. 330  
Water Disposal Project Proposal

Mr. David C. Mitchell  
Oil and Gas Engineer  
State of California  
The Resources Agency  
Department of Conservation  
Division of Oil and Gas  
4800 Stockdale Highway, Suite 417  
Bakersfield, CA 93309

Dear Mr. Mitchell:

Enclosed is a Notice of Intention to Drill and two copies of the Water Disposal Project Proposal for Santa Fe Energy Company Well No. 330, Section 32, T11N/R19W, SBBM, Tejon-Grapevine Field, Kern County, California. The well is located on property owned in fee by Santa Fe Energy Company.

Well No. 330 will be drilled to a total depth of approximately 5,800 ft. subsurface (-4,730 ft. subsea). It will be completed for injection into the permeable sands within the Round Mountain (5,170'± - 5,760'±) and/or the Lower Fruitvale (4,900'± - 5,170'±) and/or the Upper Fruitvale (4,430'± - 4,900'±) dependent upon the actual injectivity available versus that required to meet our needs. The water to be injected is that produced from our oil wells located on our Section 32 fee property.

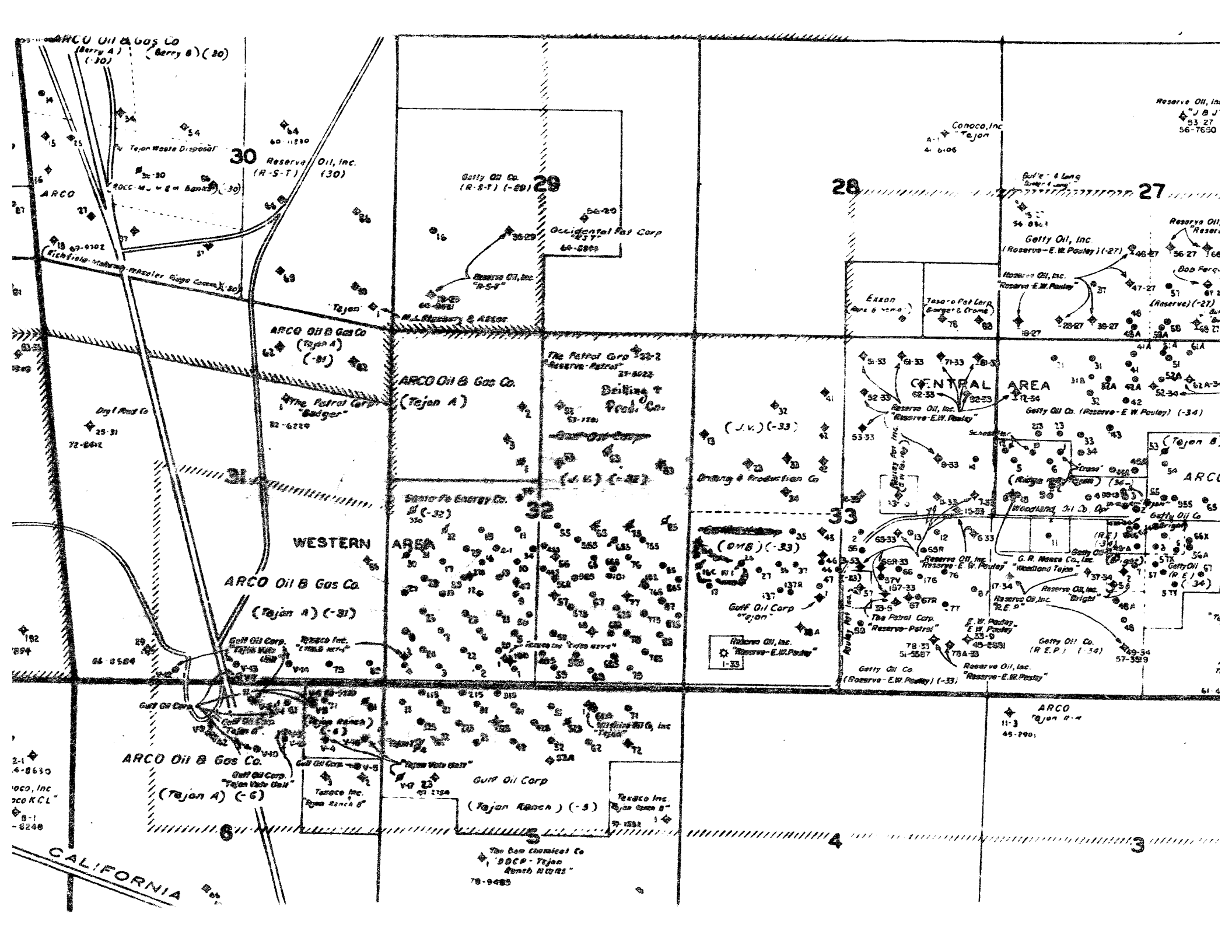
We trust the enclosed data is complete and sufficient to satisfy the needs of all concerned. Please notify us if you need additional information.

Sincerely,

J. B. Williams  
Regional Manager  
San Joaquin Valley

TMC:mr





A.3.B.

OILWELL RESEARCH, INC.  
HORNKOHL LABORATORIES DIVISION  
714 TRUXTON AVENUE  
BAKERSFIELD, CALIFORNIA 93301

Submitted by SANTA FE ENERGY  
4800 Easton Drive, Suite 120  
Bakersfield, CA 93309  
ATTN: Jeff Jones

Date August 19, 1983

Laboratory No. 2C 1679

Sample Water

Marked Well 275, Sec. 32  
Grapevine

Received Submitted to this laboratory on August 17, 1983

(Round Mountain)

WATER ANALYSES

	mg/l
Boron	24
Chlorides	7,750
Total Dissolved Solids	14,800
Electrical Conductivity micromhos/cm @ 25°C	24,000

Respectfully submitted,

  
Richard L. Penner  
Laboratory Manager

/d

A.3.B.



Western Division  
4800 Easton Drive, Suite 120  
Bakersfield, California 93309  
805/322-3992

## WATER DISPOSAL PROJECT PROPOSAL

Well No. 330  
Section 32, T11N/R19W, S.B.B.M.  
Tejon-Grapevine Field  
Kern County, California

August, 1983

### A.3.B. (continued)

Laboratory analyses of water quality are unavailable for the Lower Fruitvale and Upper Fruitvale intervals because we have no wells completed in the Upper Fruitvale interval and because we were unable to obtain any water (100% oil cut) from our well which is completed in the Lower Fruitvale interval.

Each injection interval perforated will be swabbed prior to injection. The water swabbed will be sent to a laboratory for analysis and a copy of the results will be forwarded to you.

We predict the following water quality based on available literature and informal discussions with offset operators:

	<u>Lower Fruitvale</u>	<u>Upper Fruitvale</u>
Conductivity ( $\mu$ mhos/cm)	30,700 $\pm$	21,000 $\pm$
Boron (ppm)	3 $\pm$	3 $\pm$
Chlorides (ppm)	9,500 $\pm$	6,500 $\pm$
TDS (ppm)	19,000 $\pm$	13,000 $\pm$

The actual values will probably vary.

C. 7.

Santa Fe Energy 4800 Easton Drive, Suite 120 Bakersfield, CA. 93309

**GEOCHEMICAL ANALYSIS OF WATER Pro-391**

DATE OF REPORT 7/18/83

DATE OF SAMPLING

SAMPLED BY

LABORATORY NO. 6698

ANALYST

WELL NO. (Sec. 32 11N/19W Grapevine, CA.)

COMPANY Santa Fe Energy

FIELD Tojon (Western Area)

ZONE Santa Margarita

SAMPLE SOURCE

RADICALS		PARTS PER MILLION MILLIGRAMS PER LITER	REACTING VALUE EQUIVALENTS PER MILLION	REACTING VALUE PERCENT
SODIUM	Na	730	31.74	39.32
CALCIUM	Ca	138	6.90	8.55
MAGNESIUM	Mg	16.6	1.37	1.70
BARIUM	Ba	1.5	0.02	0.02
STRONTIUM	Sr			
Potassium	K	12.4	0.32	0.40
Iron	Fe	0.25	0.01	0.01
SULPHATE	SO <sub>4</sub>	(-) 5.	--	--
CHLORIDE	Cl	1,211	34.2	42.76
CARBONATE	CO <sub>3</sub>	--	--	--
BICARBONATE	HCO <sub>3</sub>	353	5.79	7.24
HYDROXIDE	OH			
IODIDE	I			
SILICA	SiO <sub>2</sub>	50		
IRON, ALUMINA	R <sub>2</sub> O <sub>3</sub>			
TOTAL		2,513	80.4	100%

GROUP	CHEMICAL CHARACTER	MISCELLANEOUS
ALKALIS	PRIMARY SALINITY 79.44	BORON 1.2 ppm
EARTHS	SECONDARY SALINITY 6.08	HYDROGEN SULFIDE (-) 0.1 ppm
STRONG ACIDS	PRIMARY ALKALINITY --	EQUIVALENT SALT 2,396. ppm
WEAK ACIDS	SECONDARY ALKALINITY 14.48	RESISTIVITY @ 77°F 2.44 O.M.
Ca/EARTHS Mg = 5.04		CHLORINITY 1,999. ppm
CHLORIDE SALINITY		SPECIFIC GRAVITY 1.004
SULPHATE SALINITY	CARBONATE/CHLORIDE 100	pH 7.8

REMARKS

Na+K

TICKELL GRAPH

Ca+Mg+Ba+Sr

REACTING VALUE

Note: The subject water contains  
0.072 times the solids content  
of "normal sea water".

(-) refers to "less than".

Laboratories

FREE ROAD

E. 100 8

(805) 327-4911

ARC REPRESENTS "CONCENTRATION OF SOLIDS IN NORMAL SEA WATER"

H. S. Baker

C. 7.